



**3D**  
**ENGINEERING**  
from SCAN to MODEL

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# 3D MODELING

levels of detailing guide

# General information

**Our company offers three levels of detail (LOD)** in 3D modeling. refers to the level of complexity and precision of a 3D object or scene. The LOD levels range from 1 to 3, with each level representing a different level of detail and complexity.

**Level 1** is the lowest level of detail and is often used for quick prototyping, installing new equipment, renovation and visualization purposes. At this level, the focus is on creating a basic representation of the object or scene without spending too much time on minor details. The model has a simplified geometry. Standard primitive forms are used.

## **Objects, that are depicted on Level 1:**

1. Approximate general shapes of major static objects and their location:

- walls
- window holes
- doors
- pipes
- interfloor overlaps
- bearing construction elements (columns, beams etc.)
- equipment (conveyors, engines, electric boxes etc.)
- lamps

2. general landscape without precise heights (for exterior):

- roads and sidewalks
- green areas

## **Objects, that are *not* depicted on Level 1:**

- small equipment (pipes with small diameter (less than 50mm)), valves, pipe connections, flanges, indicators, cable trays)
- steps on ladders, barriers
- different types of frames
- mobile objects (carts, wires, cables etc.)
- any other exterior and interior details

# General information

**Level 2** is a step up from Level 1, offering a more detailed representation of the object or scene. At this level, the focus is on improving the overall look and feel of the model, while still maintaining a balance between efficiency and realism. The model may have a more complex geometry, with additional details.

## Objects, that are depicted on Level 2:

1. Precise general shapes of major static objects and their location:

- walls
- windows
- doors
- interfloor overlaps
- bearing construction elements (columns, beams etc.)
- frames
- barriers (simplified)
- ladders with steps
- cable trays (simplified)
- equipment (conveyors, engines, electric boxes etc.)
- lamps (generalized appearance)
- pipe connections
- simplified valves and flanges

2. More precise landscape with approximate heights (for exterior):

- roads and sidewalks
- green areas
- stairs, ramps

## Objects, that are *not* depicted on Level 2:

- small equipment (pipes with small diameter (less than 50mm)), valves, indicators)
- mobile objects (carts, wires, cables etc.)
- any other tiny exterior and interior details

# General information

**Level 3** is the medium level of detail, where the focus is on creating a believable representation of the object or scene. At this level, the model may have a highly detailed geometry, with intricate details. Level 3 used for renovation, reconstruction and visualization purposes.

## Objects, that are depicted on Level 3:

1. Precise general shapes of major static objects and their location:

- walls
- windows
- doors
- interfloor overlaps
- bearing construction elements (columns, beams etc.)
- frames
- barriers (detailed)
  - ladders with steps
  - cable trays (simplified)
  - equipment (conveyors, engines, electric boxes etc.)
  - lamps (generalized appearance)
  - pipe connections
  - generalized valves and flanges

2. More precise landscape with precise heights (for exterior):

- roads and sidewalks
- green areas
- stairs, ramps
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## Objects, that are *not* depicted on Level 2:

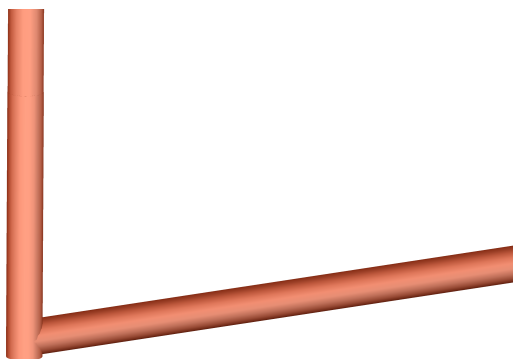
- small equipment (pipes with small diameter (less than 50mm)), valves, indicators)
- mobile objects (carts, wires, cables etc.)
- any other tiny exterior and interior details



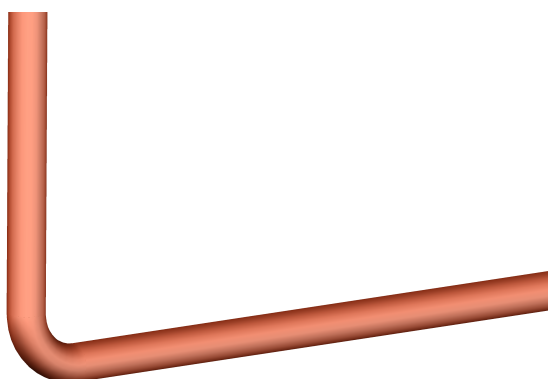
# Level of detail comparison

(pipes)

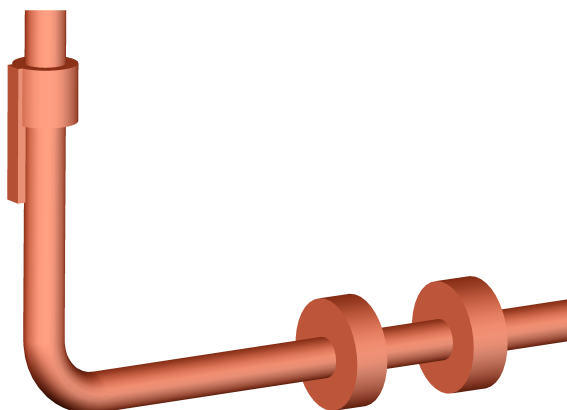
Level 1



Level 2



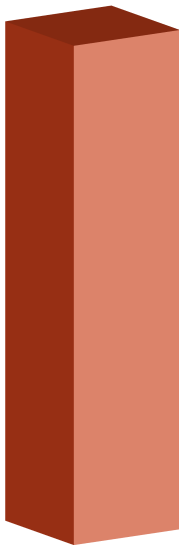
Level 3



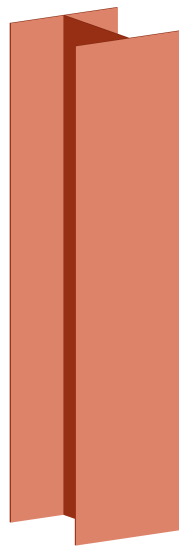
## Level of detail comparison

(beams)

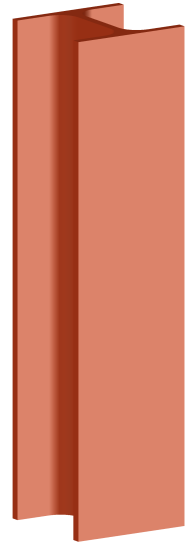
Level 1



Level 2

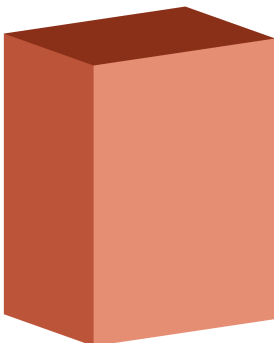


Level 3

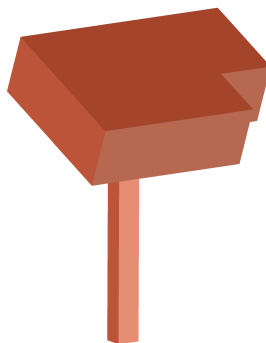


(equipment)

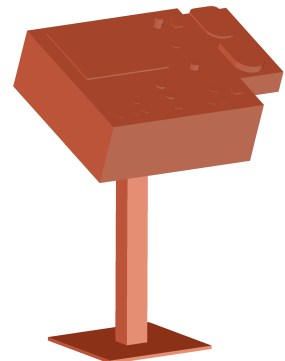
Level 1



Level 2



Level 3

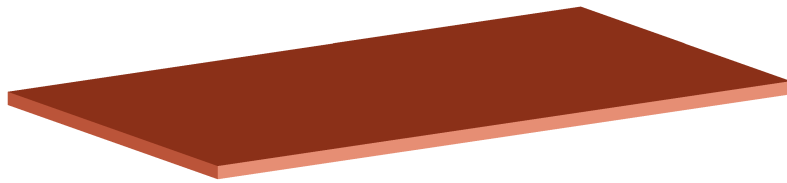




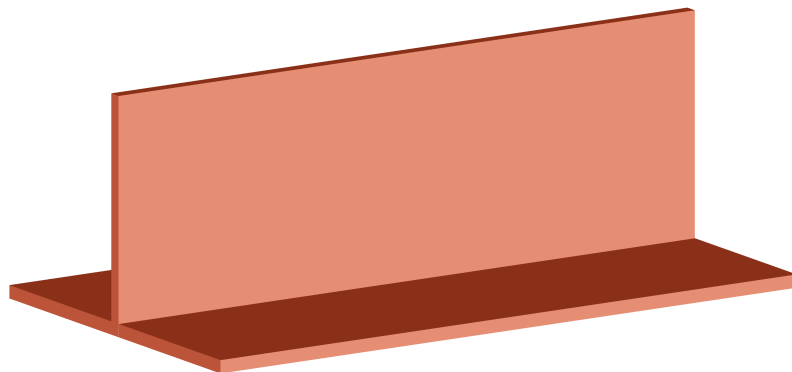
# Level of detail comparison

(barriers)

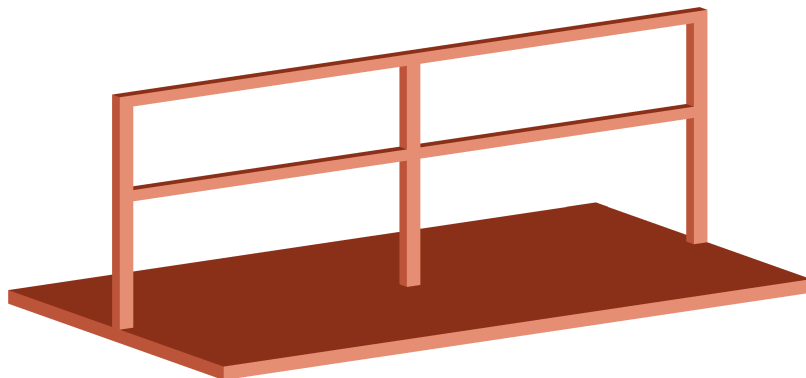
## Level 1



## Level 2



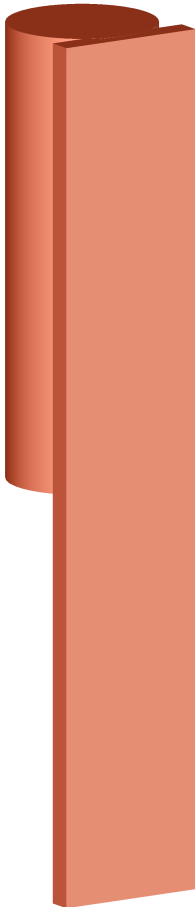
## Level 3



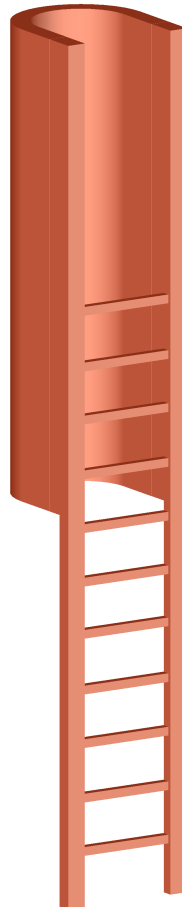
# Level of detail comparison

(ladders)

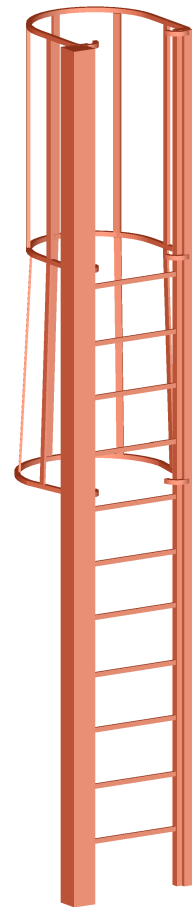
Level 1



Level 2



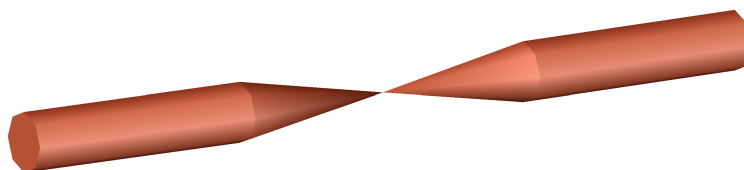
Level 3



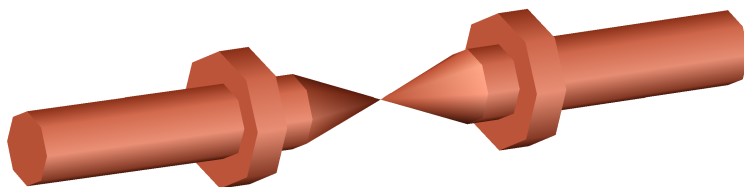
# Level of detail comparison

(valve)

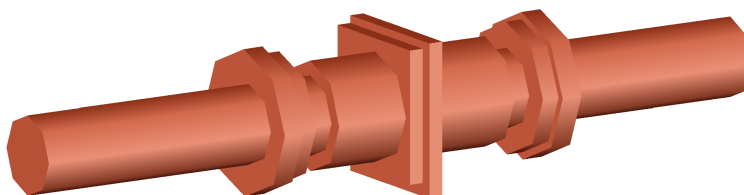
Level 1



Level 2



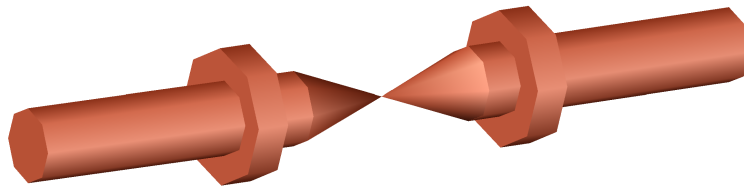
Level 3



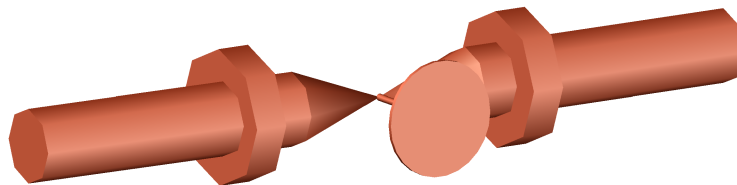
# Level of detail comparison

(valve handle)

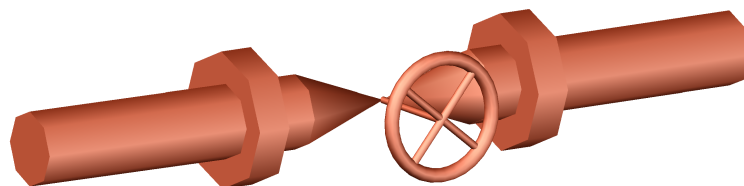
## Level 1



## Level 2



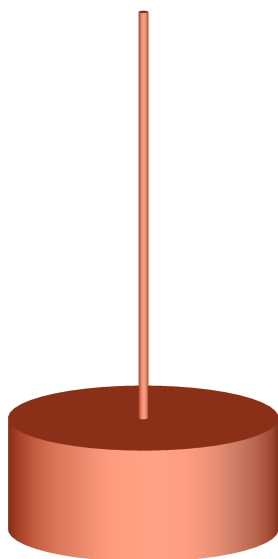
## Level 3



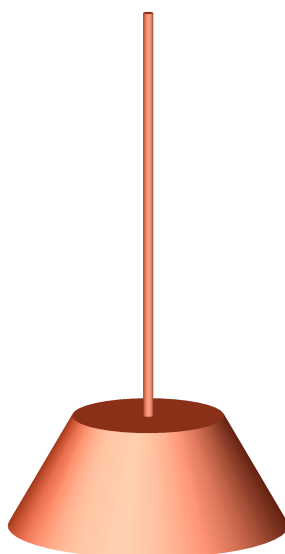
## Level of detail comparison

(lamp)

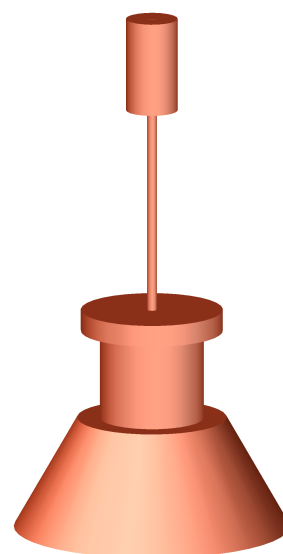
Level 1



Level 2



Level 3

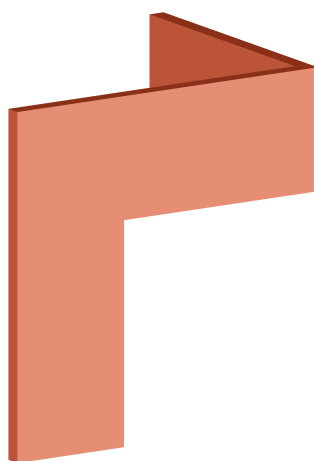


(cable tray)

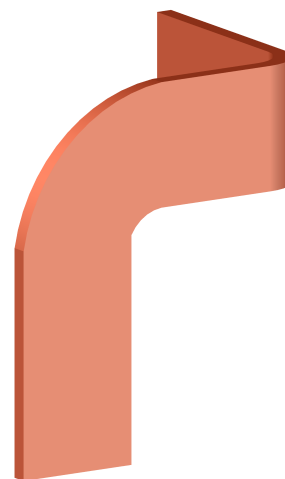
Level 1

not  
displayed

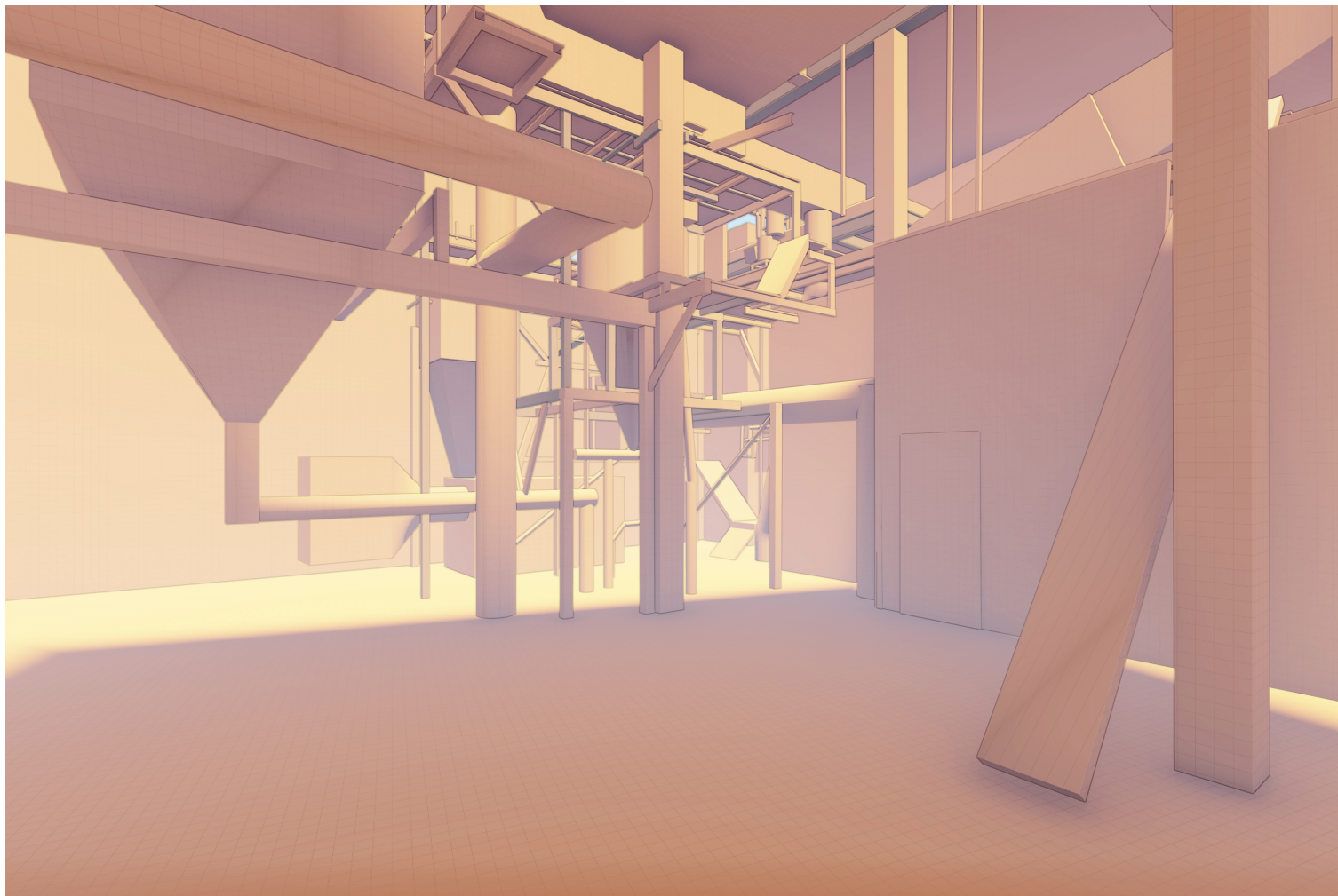
Level 2



Level 3

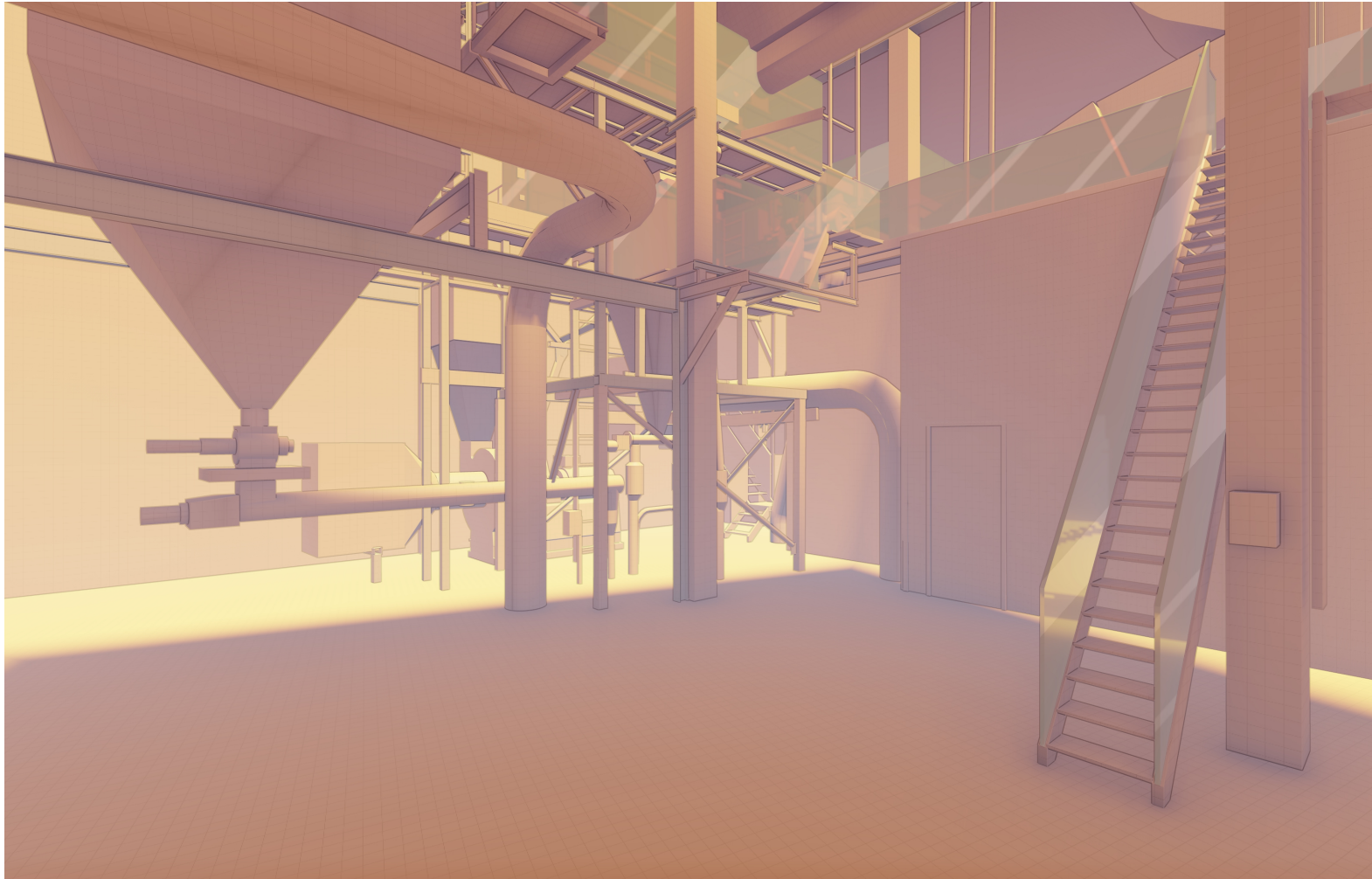


## Level 1





## Level 2



## Level 3

